Directions

January 17, 2010

EX PARTE NOTICE

Marlene H, Dortch, Secretary,
Federal Communications Commission
445 12th St, SW
Washington, DC 20554

In re: 700 MHz Interoperable Broadband Public Safety Broadband Network PS Docket 06-229

Dear Ms. Dortch:

On January 15, 2010, Roger Quayle, Chief Technology and Co-Founder of IPWireless, Andy Smith, Vice President of IPWireless, and I, the undersigned, met with Carlos Kirjner, Senior Advisor to the Chairman, to discuss issues related to the development and implementation of an interoperable broadband network for public safety.

IPWireless presented a detailed presentation that supports the 3GPP path that will ultimately allow deployment of a public safety LTE broadband network. IPWireless responded to the FCC's inquiry on whether the 3GPP standards could support "mission critical voice" over mobile broadband, including push-to-talk group calls and the functionality typically required by first responders within a 4 year time frame. IPWireless noted that the first step development of mission critical voice within 3GPP is for public safety community define requirements for "mission critical voice" For a common set of standards for public safety voice to be adopted in 3GPP, the standards process (study item, work item, standards release) typically takes up to 2 years, the exact timing often depending on when the next release (containing other items as well) is due to be published. 3GPP Release 8 radio access network standards should support push-to-talk voice over IP, as it is designed to efficiently carry IP packet data, has the necessary quality of service mechanisms, and low latency. The same applies to IPWireless' Release 7 product. Choices are then required in the core network/IP Multimedia Subsystem (IMS) and user equipment (UE). Push-to-talk group calls could be implemented in the user equipment and core network using existing Voice-over- IP standards (such as IETF) and standard codecs (such as G729). The choice of these standards, however, may vary from network to network

Public safety requirements for ruggedness and reliability is not a standards issue. Typically, a new hardware product typically takes 2 years to bring to market, but can be shorter if an existing design is modified. A 3GPP network deployment can be designed to meet mission critical requirements, in terms of coverage quality, and network reliability, redundancy and disaster resilience once public safety has so defined those requirements.

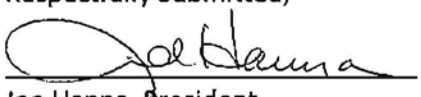
IPWireless also addressed the impact of support for mission critical voice between a privately controlled core network/IMS versus one controlled by a third party. Our response was that this could lead to a loss of control by the public safety users over the necessary functionality to support mission critical voice, depending on the extent to which the third party implements core network to meet the needs of public safety versus commercial users.

The FCC expressed interest in knowing if other countries were planning to operate mission critical voice over mobile broadband infrastructure. IPWireless responded that we had recently submitted a proposal to a government in a developed country in the Asia / Pacific region where this is being requested and considered

IPWireless responded to the FCC inquiry to understand if a public safety mobile broadband network could overlay portions of existing rural high site "big stick" public safety voice network, i.e. use the same towers. This would allow local/city/county/regional public safety broadband networks to reuse some of the existing infrastructure to reduce cost of the broadband network build-out. IPWireless believes from its evaluation of the link budgets of P25 (non-simulcast), Release 8 LTE and release 7 TD-CDMA that they are similar, when taking into account fade margins. A narrowband system such as P25 requires a much higher fade margin than a Broadband 3GPP system, which compensates for the noise bandwidth advantage of a narrowband system. We also noted that while 3GPP user equipment typically transmits at lower power (1/4 watt), there is no technical barrier to a manufacturer increasing the transmit power to further increase mobile broadband coverage relative to narrowband voice. This is tradeoff of handset size and power consumption, and public safety handset are already larger than cellular devices.

Last, IPWireless discussed performance of 3GPP release 7 (TD-CDMA and W-CDMA HSPA) and release 8 LTE, noting that average sector throughputs (which dictate user capacity and performance) were similar, and that the cell edge throughputs of TD-CDMA are in fact higher that release 8 LTE, due to the use of intercell interference cancellation. As LTE is release in the 3GPP series and a not a standard in its own right, and 3GPP defines backward and forward compatibility, IPWireless recommends that the rules for the 700 MHz public safety broadband spectrum specify the 3GPP family of standards rather than a specific 3GPP release, with a requirement to support a minimum release by a date in the future when there is a sufficient number of cities / counties deployed to reasonably require full interoperability. This will allow cities and counties to meet their immediate public safety broadband needs, while maintaining future national interoperability. IPWireless supports the evolution of an operational Public Safety mobile broadband network between 3GPP releases by using a software defined radio (SDR) base station and a SDR user equipment chipset

Respectfully Submitted,



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